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Commentary

Shanghai's Track Record in Population Health Status: What Can Explain It?

Comment on "Shanghai Rising: Health Improvements as Measured by Avoidable Mortality Since 2000"

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Abstract

Health reforms that emphasize public health and improvements in primary care can be cost-effective measures to achieve health improvements, especially in developing countries that face severe resource constraints. In their paper "*Shanghai rising: health improvements as measured by avoidable mortality since 2000*," Gusmano et al suggest that Shanghai's health policy-makers have been successful in reducing avoidable mortality among Shanghai's 14.9 million (2010) registered residents through these policy measures. It is a plausible hypothesis, but the data the authors cite also would be compatible with alternative hypotheses, as the comparison they make with trends in amenable mortality-rate (AM) in large cities in other parts of the world suggests.

Keywords: Population Health, Primary Care, Public Health in China, Universal Health Coverage, Leadership, Chinese Health Reform

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It has been assumed for some time that investments in public health and primary care are among the most cost-effective ways to improve health and achieve health equity, especially in resource constrained developing countries. For example, Vietnam, a lower-middle-income country with a population of 89.7 million and a per capita gross domestic product (GDP) of $5293 (Purchasing Power Parity) in 2013, has achieved remarkable population health outcomes thanks to its two-track system: one track focused on prevention through public health services which accounts for approximately 30% of Vietnam's total health spending in 2013, and the other track on clinical acute care.[1]

The World Health Organization (WHO), in its 2008 World Health Report, rekindling the spirit of the Alma-Ata Declaration (1978) which mobilized a "Primary Health Care movement" around the world more than thirty years ago, called for a renewal of primary care to achieve healthcare for all in the globalized world.[2]

What Drives Trends in Amenable Mortality?

"*Shanghai rising: health improvements as measured by avoidable mortality since 2000,*" Gusmano et al[3] report that the amenable mortality-rate (AM) in Shanghai had decreased by 30% from 2000 to 2010, and that this rate of decrease "was comparable to New York City (30%) and Pairs (25%), but lower than in London (42%)." This decline in AM coincided with, first, the establishment of the Shanghai Municipal Center for Disease Control and Prevention (Shanghai CDC) and, second, the upgrading of Shanghai's public health and health services systems, including an expansion of the healthcare workforce, chronic disease management, and public health surveillance. Therefore the authors cast the decline in AM as a causal flow from these public health policies to the decline in AM.

The authors' hypothesis certainly is data compatible, and it is plausible. But the authors cannot rule out alternative, plausible hypotheses on other factors that may have driven the decline in AM in Shanghai, which leaves the entire issue open to further research, including the quality of political leadership and economic development. Shanghai's per capita income has for many years been the highest in the country,[4] and was almost twice as large as the rest of China in 2013. The city continues to enjoy the highest average disposable income in all of China in 2015.[5]

The authors note that a similar decline in AM across England occurred in roughly the same period, 2001–2011. According to the Office for National Statistics of the United Kindom, the AM rate for all persons in England fell by 28%, from 240.4 per 100 000 population in 2001 to 173.5 per 100 000 in 2011.[6] This actually is a significantly lower number than the 42% decline for the city of London reported by the authors of "Shanghai rising" cited in their paper. But the causes of this decline in AM in London are not the same as those the authors of "Shanghai rising" describe as causal factors for the decline in AM in Shanghai. According to Bajekal et al,[7] for example, of the reasons offered for the decline in avoidable deaths in England were, first, "improvements in uptake" of medical and surgical treatments, which accounted for approximately 50% of the decline from coronary heart disease; and second,

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changes in lifestyle and behavioral risk factors accounted for another 30% of the decline.

The different experiences with declines in AM in London and in Shanghai raise the question what readers are to make of the "Shanghai rising" authors' comparison of time trends in AM in disparate cities whose only common characteristic is that they are of mega-size. The factors that drove the decline in AM in Shanghai are unlikely to have been the same as the factors driving the decline in AM in other cities. Exactly what message did the authors seek to convey with their few-city comparison in Figure 1? Is it mainly that in comparison with 3 mega-cities in advanced economies Shanghai's track record on AM is not bad? Or do the authors feel that there are lessons to be learned from the comparison? A bit more thought and discussion of this fundamental question would have been helpful.

It could have been illuminating, for example, to learn more about the particular channels through which the establishment of the Shanghai CDC might have contributed to the decline in AM in Shanghai. That information could possibly inform policy-makers in other countries, especially those in other developing countries seeking health reforms and universal health coverage. For example, an earlier paper by Peng et al,[8] published in the *American Journal of Public Health*, stated that among other features of the newly formed Shanghai CDC were several public health programs the new entity initiated. One of the new programs was a model program created to transform "the traditionally clinically based community hospitals into community-based health promotion and disease prevention health service centers." Similarly, it would have been helpful to learn more from the authors of "Shanghai rising" about the particular primary care initiatives that might have reduced the AM rate in Shanghai— for example, the establishment of health management programs such as identifying, monitoring and managing residents with hypertension and diabetes (SBP and DBP, HbAC1, etc), 2 major noncommunicable diseases in China targeted for population-wide management; cancer screening for early detection and treatment, which are among the major goals in China's nation-wide public health improvement efforts; and stepped up health education for the public, another national goal.

Finally, it hardly needs elaboration to note that the metric AM is only one dimension of the multidimensional phenomenon of "improvement in health status" which has not, however, precluded other authors from leaning their work on AM.[9]

Concluding Observations

Because public health policy and its impact on the health of population is so heavily path-dependent, rooted in the history, culture, and political system of nations, it is often difficult to extract lessons on health policy from one country for transfer to another. A vivid illustration of this phenomenon can be seen in the lack of success to transfer the world-famous *modes operandi* of the Kaiser Permanente health system in California[10] to other states even within the United States, for example, to Florida or New York.

China may provide an exception to this phenomenon. The evolution of China's health system from the Maoist regime to a raw but ill-fated market-based system to today's search for a judicious mixture of government-controlled cooperation of the public sector with private initiatives in effect constitutes a giant laboratory, with a myriad of experiments whose success or failure can inform policy-makers in other emerging market countries. In that regard, Shanghai's approach to health policy during the past few decades and today is an experiment warranting sustained observations and analysis.

Going forward, one priority in Shanghai's next step health reforms must be to address healthcare for its large population of migrant workers, reported by the authors of "*Shanghai rising: health improvements as measured by avoidable mortality since 2000*" to be 9.4 million, who constituted 39% of Shanghai's total resident population of 24.3 million in 2010.[3] Given the overall progress made in health insurance coverage since 2010 for China's urban residents many of whom are migrant workers, progress must also have been made in Shanghai on that front in the interim years since 2010, the last year of the 10-year period 2000–2010 the paper addressed. However, undoubtedly more will be needed.

Ethical issues

Not applicable.

Competing interests

Author declares that she has no competing interests.

Author's contribution

TMC is the single author of the manuscript.

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